

## ABSTRACT OF THE DISCLOSURE

Method and apparatus for maintaining traffic capacity in a wireless communication system including automatic frequency allocation. An automatic frequency allocation process, which removes frequencies subject to interference, is enhanced by providing an early reestablishment process that automatically determines if the allocated set of frequencies becomes too small to handle offered traffic. In this event, the new process reallocates some of the "interfered" frequencies to the allocated set, accepting a slightly increased risk of problem interference in return for having enough frequencies to meet demand. The reallocation is based on measured interference levels and a current residual penalty time for each frequency. In one embodiment, the invention is implemented in a small-scale, wireless communication system having a programmable radio exchange and one or more transceivers. Such systems are often used for wireless office communication systems, or for picocell systems which are part of a public cellular telephone network.